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Crabapples form one of the largest and most beautiful of the Arboretum groups of trees and during the last forty years a great deal of attention has been paid to it here; but the Arboretum contains many handsome but still very imperfectly known plants. It has failed to obtain a plant of the type of *Malus pumila*, a native of eastern Europe and western Asia, although it has a collection of numerous forms or hybrids of this plant. The species is the most valuable tree in the world as it is the origin of the orchard apples now cultivated in all the temperate parts of the world and produces high class fruit over a larger area than any other tree, and the wild type of such a tree, the origin of innumerable varieties of the apples of commerce, should certainly find a place in every Arboretum worthy of the name. This type does not appear to be in any European garden and no one seems to know exactly where it grows. To find it an expedition will have to be made especially for the purpose to some remote region of eastern Turkestan. It has not been possible, too, to obtain yet a plant of the wild form of *Malus sylvestris*, the species of western Europe which has also been more or less used in the development of the orchard apple and is greatly needed here.

Hybrid Crabapples. The handsomest Crabapples in the collection are hybrids, at least they are nowhere known as wild plants and do not reproduce themselves from seeds, and can only be propagated by buds or grafts. The first of these supposed hybrids to reach Europe was *Malus spectabilis* which was sent from Canton to England in 1780. It appears to have been widely cultivated in Chinese gardens and flourishes in those of Peking. It was growing in the Elgin Botanic Garden

near the city of New York in 1811 and has been in this Arboretum since 1889. Early in the last century when it was the only Asiatic Crabapple cultivated in this country it was often found here, but fifty or sixty years ago was largely replaced by more recent introductions. *Malus spectabilis* is one of the largest of the Asiatic Crabapples in the collection, growing here to the height of from twenty-five to thirty feet and forming a wide vase-shaped crown of numerous spreading and ascending branchlets. The flowers are pale pink, single or semi-double, and very fragrant. The abundant fruit is pale yellow, nearly globose, and an inch in diameter. One of its parents is undoubtedly *Malus rinki*, the edible Chinese apple. It is hard to form even a guess at its other parent. *Malus micromalus*, which is distinct in its pyramidal habit and early flowers, is possibly a hybrid of *M. spectabilis*. This plant is cultivated in Japan under the name of "kaido" under which it has been growing in the Arboretum since 1888 when plants were first obtained from the Jardin des Plantes in Paris. In habit it is one of the most distinct of all Crabapples and well worthy of a place in every collection of these plants. It is growing both along the Forest Hills Road and in the group at the base of Peter's Hill, but the petals fell nearly a week ago. *Malus Scheideckeri* is also probably a hybrid of *M. spectabilis*, and possibly of *M. micromalus*. It originated in Germany several years ago, and has been in this Arboretum since 1889. It is a small pyramidal tree with small flowers produced in great abundance.

Malus floribunda is now perhaps the most popular in this country of these supposed hybrids. It has generally been supposed to be a Japanese plant but it is not yet known there as a wild tree. It was found by Von Siebold in 1853 in a garden in Nagasaki and sent by him to Europe. Trees of this Crabapple imported from England in 1874 were planted in exceptionally deep and rich soil in the garden at Holm Lea, Brookline, and have become the largest and handsomest Crabapples in the United States, never failing to flower and produce great crops of fruit every year. The oldest plants in this Arboretum were raised from buds taken in 1876 from the plant in Francis Parkman's garden in Jamaica Plain. Japanese botanists confounded *Malus floribunda* with the Parkman Crab, *Malus Halleana*, probably another hybrid of a pyramidal growth and red flowers, which Wilson did not find in Japanese gardens. *M. floribunda* is a broad, round-topped, tree-like shrub sometimes twenty-five feet tall, with stout branches and slender, arching and pendant branchlets. The clusters of flowers are white when fully expanded and rose-red in the bud, and as they open in succession the two colors make a handsome contrast. The fruit is about the size of a pea, yellowish or yellowish brown on some plants and falls in early autumn, but on several seedlings raised at the Arboretum growing near the Administration Building the fruit remains on the branches until spring and supplies the birds with an abundant supply of food. These trees are evidently hybrids. Another hybrid possibly with *M. robusta* appeared here with a lot of seedlings of *M. floribunda* in 1883 and has been named *M. arnoldiana*. It has the habit and abundant flowers of *M. floribunda* but the flowers and fruit are nearly twice as large. It is a handsomer plant than *M. floribunda*, distinguished by its long

arching branches, and is perhaps the most beautiful Crabapple in the Arboretum. The tendency of *M. floribunda* to produce hybrids is well shown in one of the parks of the city of Rochester, N. Y., in which there are growing several trees raised from seeds gathered several years ago from one plant. These Rochester seedlings now produce abundant crops of fruit; this varies on different trees from the size of a small pea to an inch or an inch and a quarter in diameter. On some of the trees it is bright yellow, on others bright red and on others red and yellow. There is less difference in the flowers, but the leaves vary on the different plants in shape and in the absence of the covering of hairs. Most of these trees are worth descriptive names which have not yet been given to them, and show what endless work is before nurserymen who endeavor to raise Crabapples from the seeds of plants growing in large collections. *Malus atrosanguinea*, judging by its habit, is another hybrid of *M. floribunda*, from which it differs in the bright red color of the flowers. Very little is known about the origin of this plant. It is said to have originated in the Spath Nursery in Berlin, and has been growing since 1889 in the Arboretum when it was obtained from the Knaphill Nursery at Woking, England. There are two trees in the Peter's Hill group and they have never before been so beautiful, and no other Crabapple has such brilliant red flowers.

Lilacs. When the Arboretum was founded, in addition to *Syringa vulgaris* and its varieties, there were only in this country the Himalayan *S. emodi*, the Hungarian *S. Josikaea*, and the better known *S. persica*. There are now growing in the Arboretum twenty-five species of Lilacs and four hybrids and their forms. Three or four species found in remote parts of China and described by botanists have not yet been introduced into gardens, and by the use of some of the recently introduced species plant breeders may be able to produce new races which may add new and valuable varieties for the makers of gardens.

Syringa persica was known in England as early as 1658 and has been for a long time an inhabitant of American gardens. It is a beautiful hardy plant with slender, drooping, wide-spreading branches, narrower leaves than those of the common Lilacs and small, fragrant, lavender-colored flowers in short compact clusters. There is a variety with white flowers and another with lacinately lobed leaves. For years it was universally believed that because Linnaeus had named it *Syringa persica* that it was a native of Persia or of some country adjacent to Persia. Meyer collecting in China in 1915 found quantities of a Lilac covering hillsides in Kansu, and plants raised from seeds of this Lilac have flowered and proved identical with the lobed-leaf form of *S. persica*. As there is no wild specimen of the Persian Lilac in any of the great herbaria collected in Persia or other parts of western Asia it is probable that the Persian Lilac is really a Chinese plant which was early carried into the western part of the continent.

The first hybrid Lilac appeared in the Botanic Garden at Rouen in 1810, and was the result of crossing *Syringa vulgaris* and *S. persica*. It is one of the most valuable of all Lilacs and grows into a bush ten feet high and broad and of rather open habit. It is very hardy and blooms freely every year, and deserves a place in every garden where Lilacs are grown. The flowers resemble those of the Persian Lilacs,

but are longer and produced in massive clusters sometimes two feet in length and so heavy that the slender branches can hardly support them; they are reddish purple, and there are forms with darker red flowers and with nearly white flowers. This Lilac, which has often been called *Syringa rothomagensis*, unfortunately through a misunderstanding of its origin, must be called *S. chinensis* if the oldest name is used for it.

Among the twenty-three species of *Syringa* introduced by the Arboretum the most beautiful to many persons is *S. pubescens*, which was first raised in the Arboretum in 1883 from seeds sent by Dr. Bretschneider from Peking. It is a tall shrub with erect stems, small leaves and broad clusters of small, pale mauve flowers with a long slender corolla-tube. For its fragrance, which is more pungent and delightful than that of any other Lilac, *Syringa pubescens* should find a place in every northern garden. Plants in the United States have failed to produce seeds and as this species has proved unusually difficult to increase by cuttings it has remained one of the rarest Lilacs in American gardens. It can be increased by grafting, and sooner or later fertile seeds will be found on some of the large plants growing in the Arboretum. Dr. Bretschneider sent to the Arboretum at the same time seeds of *Syringa villosa*, another excellent garden plant. It is a large round-topped bush from ten to twelve feet tall and wide, with large, broad, elliptic to oblong leaves, bright green and dull on the upper surface and pale below, and broad or narrow clusters of flesh-colored or nearly white flowers which have the rather disagreeable odor of those of the Privet. It blooms freely every year, and the flowers do not open until those of most of the other Lilacs have faded.

The hybrid *Syringa Henryi* was obtained by the French gardener Henry by crossing the Hungarian *S. Josikaea* with *S. villosa*. These are both late flowering species as is the hybrid between them. Plants of this hybrid are large, vigorous, perfectly hardy and grow rapidly. The leaves resemble those of *S. villosa*, but the flowers are violet-purple or reddish purple and arranged in clusters from twelve to fifteen inches long and broad. The handsomest perhaps of this race, which has been named "Lutèce," has deep violet-purple flowers and is one of the most beautiful of all Lilacs. "Eximia," another of these hybrids, has not grown here to as large a size as "Lutèce" but is one of the handsomest late flowering plants in the collection with reddish flowers which later become pink.

The greatest show of Lilacs will be at the end of the present week, but some of the species, especially the group of Tree Lilacs from China and Japan, will not be in bloom for two or three weeks.

The earliest of the Magnolias which flower after the leaves open, the American *Magnolia Fraseri*, is already in bloom, as are several of the Horse-chestnuts, including the American Ohio Buckeye, *Aesculus glabra*, and many American Hawthorns. Flowers still make some of the Amelanchiers and Plum-trees attractive, and probably the last two days of May and the first Sunday in June will see more flowers in the Arboretum than on any other days during the year.